

WHAT IS CLAIMED IS:

1. An apparatus for transmitting and receiving data in a microwave oven having a data transmitting/receiving function from an external system, the apparatus comprising:

a wireless data transmitting/receiving unit for conducting wireless data communication with an external system including an information appliance;

a data storage unit for storing transmitted/received data through the wireless data transmitting/receiving unit and/or downloaded data from Internet;

a display unit for displaying transmitted data from the wireless data transmitting/receiving unit;

a load drive unit for driving a magnetron and/or a heater; and

Micom interfaced with the wireless data transmitting/receiving unit, the data storage unit, the display unit, and the load drive unit, and interpreting the transmitted data from the wireless data transmitting/receiving unit and/or checking a state of the microwave oven, and controlling the wireless data transmitting/receiving unit to transmit the data on the state of the microwave oven to an information appliance.

2. A system for wirelessly transmitting and receiving data with a microwave oven comprises a wireless data transmitting/receiving information appliance that is operated by a user, wherein the information appliance having access to Internet; and an intermediate medium PC or server for interfacing the information appliance with the Internet.

3. An apparatus for transmitting and receiving data in a microwave oven, the apparatus comprising:

a physical layer having a data communication means for transmitting and receiving data wirelessly between an information appliance and the microwave oven, and a data storage means for storing data downloaded by the data communication means;

an application layer for interpreting and processing data information received from the physical layer, and producing data information to be transmitted to the physical layer; and

a data link layer for configuring at least a packet by using the data information transmitted from the application layer, and transmitting the packet to the physical layer, and/or processing the packet transmitted from the physical layer, so that the packet is transmitted to the application layer.

4. The apparatus according to claim 3, wherein the data information the application layer transmits and receives is comprised of at least one of a message in relation to load control on time, temperature and output for a cooking recipe, or memory control method; a message for a control method that is not pre-designated in the microwave oven and a screen; and a necessary message for transmitting information on the internal state of the microwave oven to the information appliance.

5. A method for transmitting and receiving data in a microwave oven, the method comprising the steps of:

installing at a data transmitting/receiving information appliance a program to be communicated with the microwave;

receiving data from the information appliance over network or a server; and

transmitting the received data to the microwave oven.

6. The method according to claim 5, wherein a data packet transmitted and received between the microwave oven and the information appliance comprises at least one of STX, ETX, transmitting/receiving side, packet length, packet content, flag, CRC, message command code, and ACK/NAK.

7. A method for transmitting and receiving data in a microwave oven, the method comprising the steps of:

installing at a data transmitting/receiving information appliance a program to be communicated with the microwave;

receiving data from the information appliance over network or a server;

transmitting the received data to the microwave oven;

storing and/or displaying the received data; and

cooking, in the microwave oven, food based on the received data.

8. The method according to claim 7 further comprises the step of:

controlling the microwave oven by using the transmitted data to the microwave oven.

9. A method for transmitting and receiving data between data transmitting/receiving microwave oven and information appliance, the method comprising the steps of:

displaying on the microwave oven or the information appliance data on a state of the microwave oven at a user's request or according to the state of the microwave oven; and
determining the state of the microwave oven on the basis of the displayed data.

10. The method according to claim 9 further comprises the step of:
controlling and/or repairing the microwave oven based on the determined state of the microwave.

11. The method according to claim 9 further comprises the step of:
periodically transmitting the data on the state of the microwave oven.

12. The method according to claim 9 further comprises the step of:
aperiodically transmitting the data on the state of the microwave oven.